Canadian Institutes of Health Research | Instituts de recherche en santé du Canada

Canadian Institutes of Health Research

2017–18

Departmental Plan

The Honourable Jane Philpott, P.C., M.P.
Minister of Health

Canada

Canadian Institutes of Health Research (CIHR)

At CIHR, we know that research has the power to change lives. As Canada's health research investment agency, we collaborate with partners and researchers to support the discoveries and innovations that improve our health and strengthen our health care system.

Canadian Institutes of Health Research
160 Elgin Street, 9th Floor
Address Locator 4809A
Ottawa, Ontario K1A 0W9
www.cihr-irsc.gc.ca

Also available on the Web in PDF and HTML formats

© Her Majesty the Queen in Right of Canada (2017)

Cat. No. MR1-29E-PDF

ISSN 2371-6827

Table of contents

Minister's message 1

Plans at a glance 3

Raison d'être, mandate and role: who we are and what we do 5

- Raison d'être 5
- Mandate and role 5

Operating context: conditions affecting our work 7

Key risks: things that could affect our ability to achieve our plans and results 9

Planned results: what we want to achieve this year and beyond 11

- Programs 11
- Internal Services 19

Spending and human resources 21

- Planned spending 21
- Planned human resources 23
- Estimates by vote 23
- Future-Oriented Condensed Statement of Operations 24

Supplementary information 25

- Corporate information 25
- Supporting information on lower-level programs 25
- Supplementary information tables 26
- Federal tax expenditures 26
- Organizational contact information 26

Appendix: definitions 27

Endnotes 31

Minister's message

Our 2017–18 Departmental Plan provides parliamentarians and Canadians with information on what we do and the results we are trying to achieve during the upcoming year. To improve reporting to Canadians, we are introducing a new, simplified report to replace the Report on Plans and Priorities.

The title of the report has been changed to reflect its purpose: to communicate our annual performance goals and the financial and human resources forecast to deliver those results. The report has also been restructured to tell a clearer, more straightforward and balanced story of the actual results we are trying to achieve, while continuing to provide transparency on how tax payers' dollars will be spent. We describe our programs and services for Canadians, our priorities for 2017–18, and how our work will fulfill our departmental mandate commitments and the government's priorities.

I am pleased to present the 2017–18 Departmental Plan (DP) of the Canadian Institutes of Health Research (CIHR).

Canada faces many pressing challenges with regard to health and CIHR plays a critical role in informing the evidence-based policies we need to meet those challenges. These include ensuring the sustainability of our health system, improving the quality and accessibility of care, and improving the health and well-being of First Nations, Inuit, and Métis peoples.

One particularly urgent public health concern we face as a nation is opioid overdose. Canada is the second largest consumer of painkillers per capita and has the highest rate of prescription opioid use in the world. As expressed in the Joint Statement of Action to Address the Opioid Crisis, CIHR is working with decision-makers to ensure that they have the most up-to-date research evidence to inform policies. CIHR is also accelerating the dissemination of research results so that all Canadians, including physicians, have access to the latest evidence to make informed decisions about the best available treatments for pain, and the risks associated with opioid consumption. As well, CIHR is investing up to $1 million over five years to support new research projects aimed at better understanding how differences in gender and sex affect opioid use.

Another central challenge for our health care system is antimicrobial resistance – an emerging health crisis that is reducing our ability to control bacterial infections. While antibiotics have saved the lives of countless people throughout the world, their widespread overuse and misuse have also created a generation of drug-resistant microbes (such as Clostridium difficile) that pose serious risks to public health. In an effort to check the spread of antimicrobial resistance, CIHR has launched a number of research initiatives, including the Novel Alternatives to Antibiotics

initiative, Canada-UK Partnership on Antibiotic Resistance, the Joint Programming Initiative on Antimicrobial Resistance, and Antimicrobial Resistance: Point of Care Diagnostics in Human Health. By supporting research on the mechanisms and processes that lead to the spread of antimicrobial resistance, CIHR is playing a leadership role in the global effort to contain this serious threat.

Of course, health research evidence and innovations are most useful when they are shared throughout the country and used to improve provincial/territorial health care systems. This is where the Strategy for Patient-Oriented Research (SPOR) plays a vital role. Through SPOR, patients, researchers, health care practitioners, and other stakeholders are working collaboratively to accelerate the translation of research evidence into care; to validate what works and what does not; and to share best practices amongst the provinces and territories so that they can be scaled-up across Canada. One of the great achievements of SPOR is the strong partnership it has built between the federal and provincial/territorial governments through the creation of SUPPORT Units – centres of expertise in patient-centered research. With the recent launch of the British Columbia SUPPORT Unit, these research hubs are now operating throughout Canada and are working hard to find real-world solutions to the issues that matter most to patients. As the Government of Canada and the provinces and territories work to improve the health care system, SPOR will play a key role in sharing innovative practices and ensuring quality of care across the country.

On behalf of CIHR, I invite you to read this plan to learn more about how CIHR's broad and diversified investments are allowing research to serve the needs of Canadians and strengthen Canada's health care system.

The Honourable Jane Philpott, P.C., M.P.

Minister of Health

Plans at a glance

CIHR is currently in the third year of the implementation of its strategic plan called Health Research Roadmap II: Capturing Innovation to Produce Better Health and Health Care for Canadians (Strategic Plan 2014–15 to 2018–19).[i] Roadmap II is the product of widespread consultations with diverse members of Canada's health research communities, an assessment of significant and emerging trends in the health research landscape, and ongoing deliberations about what CIHR aims to achieve. It builds on CIHR's vision to capture excellence and accelerate health innovation in Canada via three strategic directions, which align to the Government of Canada objective related to Healthy Canadians, as well as CIHR's 2017–18 Program Alignment Architecture (for more information see the Reporting framework section on page 25).

Program 1.1: Investigator Initiated Health Research

Promoting Excellence, Creativity and Breadth in Health Research and Knowledge Translation through:

Priority 1: Supporting leading researchers and important advances in health

- Through investments in Investigator Initiated Health Research, CIHR will fund $500M in new and ongoing grants aimed at supporting Canada's most innovative researchers. These investments will sustain the foundation of health-related research by advancing health and scientific knowledge, and further the application of that knowledge to benefit health care, health systems, and health outcomes. In an effort to protect and maximize the return on Canada's investment in developing research talent, CIHR will provide $30M in funding to support early career researchers who will explore new ideas, develop world-class expertise and establish a successful track record in research.

Priority 2: Building a solid foundation for the future of health-related research

- In 2017–18, CIHR will invest approximately $160M to support approximately 2,200 highly skilled and promising researchers and trainees in Canada and abroad to position them for success as the health research leaders of tomorrow and to build health research capacity to improve health and the health care system.

Program 1.2: Priority Driven Health Research

Mobilizing Health Research for Transformation and Impact through:

Priority 1: Addressing health and health system research priorities

- Through $200M in investments, CIHR will fund research to address priority research areas and communities. Research priorities are identified in consultation with partners and stakeholders in order to respond to the health and health care system challenges that matter to Canadians.

Priority 2: Building a healthier future for First Nations, Inuit and Métis peoples

- In 2017–18, CIHR will continue to enhance its relationship with First Nations, Inuit, and Métis communities. Based on the advice received from these communities to date, CIHR will implement the commitments outlined in the Action Plan: Building a healthier future for First Nations, Inuit, and Métis peoples,[ii] to further strengthen Indigenous health research in Canada. As part of this 2017–18 Action Plan, the Agency is committed to increasing investments in Indigenous health research to a minimum of 4.6% of CIHR's annual budget. CIHR will also increase its capacity to interact with Indigenous communities in a culturally appropriate manner. This will be delivered through the creation of a dedicated fund, peer review process. Additionally, a team will be assigned to work directly with Indigenous peoples, researchers, and communities in order to positively impact the health and wellness of Indigenous populations.

Priority 3: Horizontal Health Research Initiatives

- CIHR will invest $80M in approximately 300 grants and awards to promote and maximize horizontal health research initiatives. These initiatives are identified by CIHR and its partners and focused on the most promising areas of innovation, in Canada and internationally, that have the potential to sustainably reduce growth in health spending while leading to improvements in the quality and accessibility of care of Canadians.

For more information on the Canadian Institutes of Health Research's plans, priorities and planned results, see the "Planned results" section of this report.

Raison d'être, mandate and role: who we are and what we do

Raison d'être

The Canadian Institutes of Health Research (CIHR) is the Government of Canada's health research funding agency. The Minister of Health is responsible for this organization. It was created in June 2000 by the Canadian Institutes of Health Research Act with a mandate "to excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system."

CIHR's mandate seeks to transform health research in Canada in an ethically sound manner by:

- Funding both investigator initiated and priority driven research;
- Building research capacity in under-developed areas and training the next generation of health researchers; and
- Focusing on knowledge translation that facilitates the application of the results of research and their transformation into new policies, practices, procedures, products and services.

CIHR Institutes
Scientific Directors*

Aboriginal Peoples' Health
Dr. Carrie Bourassa

Aging
Dr. Yves Joanette

Cancer Research
Dr. Stephen Robbins

Circulatory and Respiratory Health
Dr. Brian Rowe

Gender and Health
Dr. Cara Tannenbaum

Genetics
Dr. Paul Lasko

Health Services and Policy Research
Dr. Robyn Tamblyn

Human Development, Child and Youth Health
Dr. Shoo K. Lee

Infection and Immunity
Dr. Marc Ouellette

Musculoskeletal Health and Arthritis
Dr. Hani El-Gabalawy

Neurosciences, Mental Health and Addiction
Dr. Anthony Phillips

Nutrition, Metabolism and Diabetes
Dr. Philip M. Sherman

Population and Public Health
Dr. Steven J. Hoffman

*http://www.cihr-irsc.gc.ca/e/2890.html

Mandate and role

CIHR integrates research through a unique interdisciplinary structure made up of 13 "virtual" institutes.[iii] These institutes are not "bricks and mortar" buildings but, rather, communities of experts in specific areas. Collectively, the institutes support a broad spectrum of research: biomedical, clinical, health systems and services, and the social, cultural and environmental factors that affect the health of populations. Institutes form national research networks linking researchers, funders and knowledge users across Canada in order to work collaboratively on priority areas.

As Canada's health research funding agency, CIHR makes an essential contribution to the Minister of Health's overall responsibilities by funding the research and knowledge translation needed to inform the evolution of Canadian health policy and regulation, and by taking an advisory role on research and innovation issues. This is achieved through an extensive and growing set of linkages with Health Canada and the Public Health Agency of Canada, providing decision makers with access to high-quality and timely health research outcomes and results.

CIHR also works closely with the Natural Sciences and Engineering Research Council (NSERC)[iv] and the Social Sciences and Humanities Research Council (SSHRC),[v] the two granting councils of the Innovation, Science and Economic Development portfolio, to share information and coordinate efforts, harmonize practices, avoid duplication and foster multidisciplinary research. The three organizations (referred to as "Tri-Agency") provide a channel for the implementation of common policies, practices and approaches, whenever possible.

CIHR's Governing Council (GC)[vi] sets the strategic directions of the Agency and is responsible for evaluating its performance. Leadership on research and knowledge translation is provided by the Science Council (SC),[vii] while leadership on corporate policy and management is provided by the Executive Management Committee (EMC).[viii]

For more general information about the department, see the "Supplementary information" section of this report. For more information on the department's organizational mandate letter commitments, see the Minister's mandate letter on the Prime Minister of Canada's website.[ix]

Operating context: conditions affecting our work

Health research plays an important role, not only in improving health outcomes for Canadians and people around the world, but also in contributing to the overall societal and economic prosperity of Canada. As the major federal funder of health research in Canada, CIHR is well positioned to attract, capture and support innovative ideas that hold the greatest potential for advancing knowledge and providing solutions for Canada's most complex health challenges.

Over the past year, progress was made in implementing the strategic directions set out in CIHR's strategic plan, Health Research Roadmap II, to contribute to a sustainable Canadian health research environment and to ensure the reliability, consistency, fairness and efficiency of the competition and review processes. As part of the implementation of the reforms of Open Programs and peer review[x], CIHR finalized the integration of its legacy open programs into CIHR's new Foundation and Project Grants competitions. In addition, with the College of Reviewers, CIHR has created a national resource that facilitates peer review across Canada, in all areas of health research.

In July 2016, CIHR held a Working Meeting with the Research Community to discuss changes to CIHR's program design and peer review processes. A Peer Review Working Group[xi] was subsequently established to further discuss the recommendations emanating from this meeting. CIHR is committed to working with the community on these recommendations, and updates on their adoption and implementation are regularly communicated via CIHR's website and other communication platforms. Implementing these recommendations will ensure that CIHR is able to recruit well-trained, knowledgeable and varied peer review experts.

In September 2016, CIHR launched an International Peer Review Expert Panel[xii] to examine the design and adjudication processes of CIHR's investigator initiated programs, in relation to the CIHR mandate and the changing health sciences landscape, international funding agency practices, and the available literature on peer review. After the Panel's final report is tabled with CIHR's Governing Council and made public in 2017, CIHR will review and begin to address its recommendations in 2017–18.

To build a healthier future for First Nations, Inuit and Métis peoples, CIHR is committed to addressing the ongoing, long-standing gap in health status between Indigenous and non-Indigenous peoples in Canada through its health research programs and policies. CIHR will support the health and wellness of Indigenous peoples through contributions to evidence-informed and culturally-sensitive health and social policies and interventions. Ultimately, our goal is to improve Indigenous health outcomes in Canada, as detailed in CIHR's Indigenous Health Research Action Plan published in November 2016.

Given this organizational context, CIHR has identified three key risks that could impact our ability to deliver on our strategic plan and meet research community expectations. In light of these risks, CIHR has set out organizational priorities for 2017–18 that will not only mitigate these risks but ensure alignment with government of Canada priorities, which are detailed in the Key risk table section below.

It should be noted that a new Policy on Results[xiii] was implemented by the Treasury Board Secretariat (TBS) on July 1, 2016. In 2017–18, CIHR will develop and implement the requirements of the Policy on Results, which sets out the fundamental requirements for Canadian federal departmental accountability for performance information and evaluation, while highlighting the importance of results in management and expenditure decision making, as well as public reporting.

Key risks: things that could affect our ability to achieve our plans and results

Key risks

Risks	Risk response strategy	Link to the department's Programs	Link to mandate letter commitments or to government-wide and departmental priorities
Risk 1 – Delivery of Foundation and Project Grant Competitions: There is a risk that CIHR's ability to deliver the Foundation and Project Grant Competitions could be impacted through ongoing pressure from the research community to change the competition delivery design. This pressure is resulting in impacts on competition processes and timelines. It is also possible that the participation of Canada's health research community in CIHR review processes will decrease.	CIHR will proactively and more frequently communicate with the research community while it addresses and implements the recommendations received to date. Changes have also been made to CIHR's peer reviewer recruitment processes following recommendations of the Peer Review Working Group. Further changes will be assessed following the recommendations of the International Peer Review Expert Panel.	Program 1.1: Investigator Initiated Health Research	Government-wide priority • Healthy Canadians CIHR Priority • Supporting leading researchers and important advances in health
Risk 2 – Maintaining ongoing business and supporting new business processes: There is a risk that the organization will be impacted by limitations and delays in technology modernization and integration through Project Enabling Business by Leveraging Systems (EnaBLeS). This may impact CIHR's ability to adequately maintain its ongoing business as well as support new business processes. This could result in a loss of credibility	Through the EnaBLeS Steering Committee, CIHR will continue to monitor, manage and mitigate the technology modernization and integration processes necessary for implementing Roadmap II. CIHR is also updating its detailed project plan to ensure that the Agency can optimize the time and cross-organizational resources required to support the new business processes.	Program 1.1: Investigator Initiated Health Research Program 1.2: Priority Driven Health Research Internal Services	Government-wide priority • Healthy Canadians CIHR Priority • Supporting leading researchers and important advances in health • Addressing health and health system research priorities

from key external and internal stakeholders and the public at large.			
Risk 3 – Ability to manage external stakeholder expectations: There is a risk that CIHR's ability to manage the expectations of various stakeholder groups (such as Indigenous health researchers, early career investigators, gender and official language minority communities) may be beyond the Agency's current capacity. With the number of competing expectations increasing, CIHR will need to effectively communicate with stakeholder groups and bring competing needs into alignment otherwise CIHR may lose stakeholder trust in the organization.	CIHR will continue to engage the different research communities through the implementation of its inclusive partnership and stakeholder strategy. CIHR will also implement the Indigenous health research action plan. At the same time, CIHR will increase awareness of gender inequities and those related to the vitality of official language minority communities. CIHR will create new tools to provide information, resources and training for peer reviewers to help them to recognize funding issues and avoid unconscious bias during the peer review process. CIHR will also implement the recommendations of the Peer Review Working Group on equalizing success rates for early career investigators in the Project Grant program as well as for women at Stage 1 of the Foundation Grant program.	Program 1.1: Investigator Initiated Health Research Program 1.2: Priority Driven Health Research	Government-wide priority • Healthy Canadians CIHR Priorities • Supporting leading researchers and important advances in health • Addressing health and health system research priorities • Building a healthier future for First Nations, Inuit and Métis peoples

CIHR has developed an Integrated Risk Management Framework (IRMF), designed to provide a proactive response to identify, monitor and manage risks and ensure CIHR's ability to operationalize its processes. A key output of the IRMF approach at CIHR is the development of an annual Corporate Risk Profile (CRP). The CRP sets out the key threats and opportunities that have the potential to affect the achievement of the Agency's mandate and outlines the management strategies to address these risks.

Through the review of the CRP in fall 2016, CIHR identified risks requiring mitigation and monitoring and three of the higher risks are outlined in the table above. CIHR continues to strengthen risk indicators and risk response monitoring and reporting in order to facilitate reporting on our progress by managing and mitigating those priority risks.

Planned results: what we want to achieve this year and beyond

Programs

Program 1.1: Investigator Initiated Health Research

Description

To develop and support a well-trained base of world-class health researchers and trainees conducting ethically sound research across all aspects of health, including biomedical research, clinical research, research respecting health systems, health services, the health of populations, societal and cultural dimensions of health and environmental influences on health, and other research as required. The goal of this program is to advance health knowledge and to apply this knowledge in order to improve health systems and/or health outcomes. Grants and awards are disbursed to fund research or to provide career or training support. The specific area of research is identified by the researcher.

Planning highlights

Investigator Initiated Health Research will provide grant and award funding to increase the capacity of Canada's health research community by allowing researchers to identify the area of research and focus on the very best ideas, from discovery to application. It also provides opportunities to train the next generation of health researchers and professionals. These investments are made through two Sub-Programs: Operating Support and Training and Career Support.

Through the Operating Support Sub-Program, in 2017–18, CIHR will invest $500M through the Foundation and Project Grant competitions, which are designed to meet the needs of a broad disciplinary mix of researchers within CIHR's mandate. The Foundation and Project Grant competitions represent complementary approaches for promoting creativity, driving innovation and capturing ground-breaking health research in diverse and emerging fields. In addition, CIHR will also continue to make enhancements to these grant competitions and peer review processes, as well as to modernize systems and client services related to the delivery of all CIHR programs.

CIHR will invest in the development of research talent through a specific funding envelope of $30M per year (ongoing) dedicated to early career investigators research projects. This is part of the 2016 Federal Budget investment[xiv] for Investigator Initiated Health Research, which will be used to fund approximately 40 additional project grants from early career investigators.

In 2017–18, there will be three funding competitions: one for Foundation Grants and two for Project Grants. In addition, funds will flow to successful applicants in May 2017 for the fall 2016 Project Grant competition and in August 2017 for the fall 2016 Foundation Grant competition.

In 2017–18, through the College of Reviewers (the College), CIHR will ensure that Canada remains competitive and continues to fund world class science. Through the College, CIHR aims to enhance the current peer review system by systematizing reviewer recruitment to identify and mobilize the appropriate expertise for the review of all funding applications. CIHR has undergone a series of transformations in its funding programs and peer review processes and will continue to work closely with the research community and the College Chairs to design and launch the College. CIHR will also be developing customized learning and mentoring programs and implementing quality assurance programs that support continuous improvement at all levels.

As part of the Ethics Action Plan,[xv] CIHR aims to nurture ethics research capacity in Canada by monitoring and reporting on the application pressure and success rates of ethics researchers in both current and new Project Grant and Foundation Grant competitions as they are implemented. CIHR will also ensure the recruitment of peer reviewers with the necessary knowledge and expertise for reviewing ethics research applications.

As part the Training and Career Support[xvi] Sub-Program, CIHR will focus on working with the other federal research councils to develop strategies to strengthen Indigenous research capacity through training and mentoring along the entire career continuum from undergraduate to postdoctoral levels.

CIHR will also deliver on new approaches to enhance health research training as part of its strategic action plan on training. Examples of these new approaches include career development and peer reviewer training. CIHR will also build on the knowledge gained from its Career Trajectory Survey data to better position trainees supported across its programs for impactful careers.

CIHR will invest in a broad mix of researchers and trainees in Canada and abroad, from a variety of disciplines, by providing support to master's, doctoral and postdoctoral/post health professional students, as well as a variety of career awards:

- CIHR will invest more than $160M in 2017–18 to support approximately 2,200 new and ongoing training and salary awards, which will continue to build and maintain Canada's health research capacity across the entire spectrum of health research.
- Close to 575 researchers will be supported through the Canada Research Chairs program, which provides support to new and established investigators. This is in

addition to the Canada Excellence Research Chairs program, created to support world renowned researchers and their teams to establish ambitious research programs at Canadian universities.

- Through Tri-agency programs, CIHR will fund approximately 530 Canada Graduate Scholarships (CGS) at the masters and doctoral levels, 56 new Vanier CGS and 23 new Banting postdoctoral fellowships. CIHR will also fund approximately 170 new postdoctoral/post health professional students.

In addition, CIHR will continue its work to harmonize CGS at the doctoral level. This work was slowed down in 2016 to provide more time for consultation, and in consideration of when the program might be on-boarded to a common Tri-Agency technological platform.

Finally, CIHR will work on developing strategies to address issues identified with both the Banting and CGS evaluations through its Management Response[xvii] action plan. For the Banting program, issues to address include its ability to attract and retain students from abroad, enable fellows to develop their leadership potential, and position them for success as research leaders of tomorrow. For the CGS program, improvements will be made to the performance management framework and a communications strategy will be created with a focus on branding.

In 2017–18, CIHR will finalize the evaluation of the Operating Support Grant program which will examine whether research needs are being addressed and the impacts achieved through CIHR investments.

Overall, the Agency will support approximately 6,000 grants and awards including 1,500 new grants and awards for a total investment of approximately $700M in 2017–18 through the Investigator Initiated Health Research Program.

Planned results

Expected results	Performance indicators	Target	Date to achieve target	2013–14 Actual results	2014–15 Actual results	2015–16 Actual results
Canada has an internationally competitive health research community	Canada's health research specialization index ranking versus international levels (G7 nations)	2nd among G7	March 31, 2018	3rd	2nd	2nd
CIHR funded research has improved the health of Canadians	Percent of CIHR grants reporting contribution to improved health for Canadians	30%	March 31, 2018	34%	34%	37%
Canadian health researchers advance health research knowledge	Canada's ranking among G7 in health research publications per million dollars of Gross Domestic Expenditure on Research and Development (GERD)	2nd among G7	March 31, 2018	3rd	3rd	1st

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2018–19 Planned spending	2019–20 Planned spending
729,420,974	729,681,747	736,801,477	728,758,203

Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2018–19 Planned full-time equivalents	2019–20 Planned full-time equivalents
125	120	122

Information on the Canadian Institutes of Health Research's lower-level programs is available on the CIHR's website[xviii] and in the TBS InfoBase.[xix]

Program 1.2: Priority Driven Health Research

Description

CIHR provides funding to researchers for ethically sound emergent and targeted research that responds to the changing health needs and priorities of Canadians across all aspects of health, including biomedical research, clinical research, research respecting health systems, health services, the health of populations, societal and cultural dimensions of health and environmental influences on health, and other research as required. The goal of this program is to advance health knowledge and its application, in specific areas of research identified by CIHR in consultation with other government departments, partners and stakeholders, in order to improve health systems and/or improve health outcomes in these priority areas. Grants are disbursed to fund research or to provide career or training support

Planning highlights

In 2017–18, CIHR will provide approximately $300M in targeted grant and award funding to mobilize researchers, health practitioners and decision makers to work together to address priority health challenges through two Sub-Programs: the Institute Driven Initiatives and the Horizontal Health Research Initiatives.

CIHR has been developing its Partnership Strategy and finalizing and implementing a Stakeholder Engagement Strategy, in order to embrace and leverage collaborations with existing or new partners from academia, the private sector, foundations and governments. The implementation of these strategies will also ensure the integration of relevant stakeholders in the research process to help accelerate changes in health policy and practice.

CIHR will develop and invest in several types of initiatives related to specific research areas such as the launch of the Personalized Health[xx] initiative, Phase 2 of CIHR's Canadian Epigenetics, Environment and Health Research Consortium (CEEHRC) [xxi] funding opportunity, and the international component of the Healthy Life Trajectories Initiative.[xxii] Each of these initiatives involves collaboration between CIHR's Institutes and a wide range of partner organizations.

The Agency with its 2017–18 action plan: Building a healthier future for First Nations, Inuit, and Métis peoples, is committed to increasing investments in Indigenous health research to a minimum of 4.6% of its annual budget. As part of this plan, CIHR through the Pathways to Health Equity for Aboriginal Peoples[xxiii] will seek to strengthen the capacity of Canada's research community and future generations of Indigenous health researchers, to advance health and scientific knowledge and apply that knowledge to benefit Indigenous health priorities. In

2017–18, some of the key activities will include planning the third Pathways Annual Gathering by bringing together Pathways teams and participating communities, monitoring the progress of the Implementation Research Team funding, and elaborating the design of the future competition.

As mentioned in its 2016 evaluation,[xxiv] the Strategy for Patient-Oriented Research (SPOR) is a relevant national coalition of federal, provincial and territorial partners dedicated to the integration of research into care. SPOR is in the early stages of influencing the health research landscape, shifting the culture towards patient-oriented research, and improving patient outcomes. In 2017–18, CIHR will continue to build on early successes and be active in responding to the evaluation recommendations[xxv] by:

- communicating plans for moving beyond the initial five-year funding period to manage sustainability expectations for CIHR investments in SPOR;
- strengthening approaches to enable cross-learning, sharing of best practices, and collaboration in Canada and internationally;
- finalizing and implementing the Foundations in Patient-Oriented Research Curriculum; and
- revising the existing SPOR performance measurement strategy.

In 2017–18, CIHR and the Public Health Agency of Canada will continue to support new and ongoing targeted funding such as the HIV/AIDS Research Initiative,[xxvi] and the Improved Immunization Coverage Initiative.[xxvii] Support will also be provided to the Canadian Immunization Research Network[xxviii] (a national network of vaccine researchers that develops and tests methodologies related to the evaluation of vaccines as they pertain to safety, immunogenicity and effectiveness) including support for program implementation and evaluation.

The Government of Canada, through CIHR, invests in a global research network to combat Antimicrobial Resistance Initiatives (AMR).[xxix] AMR occurs when medications to treat or prevent infections stop working and is a serious global public health threat. CIHR will invest approximately $2.5M over the next year to fund Canadian researchers on global teams to study how AMR spreads, and develop innovative prevention and intervention strategies to reduce AMR. CIHR will also invest in Canadian teams to develop innovative diagnostic tools to help clinicians identify if prescribing antibiotics will be effective.

Canada faces a serious and growing opioid crisis with significant health and social issue resulting in devastating consequences for individuals, families, and communities. On November 19, 2016,

the Federal Minister of Health and the Ontario Minister of Health and Long-Term Care co-hosted a Summit where more than 40 organizations committed to take concrete actions to respond to the opioid crisis. [xxx] At the Summit, CIHR committed to launching two new funding opportunities by June 2017.

CIHR will also play a significant role in global health research efforts in 2017–18 through multinational partnerships including the Global Alliance for Chronic Diseases (GACD)[xxxi] and initiatives under the European Commission's Horizon 2020 framework.[xxxii]

In 2017–18, CIHR will continue to support the Networks of Centres of Excellence (NCE) [xxxiii] programs, delivered collaboratively by the Tri-Agency NCE Secretariat. CIHR will work to continuously improve the NCE suite of programs to respond to advances in Canadian and international science, technology and innovation ecosystems, and to bring new technologies, products and services to market faster. Moving forward, CIHR involvement in these networks will also be informed by Canada's Fundamental Science Review and Innovation Agenda.

In collaboration with NSERC and SSHRC, CIHR is expected to contribute to the funding of approximately 10 recipients through the Canada First Research Excellence Fund (CFREF) [xxxiv] in 2017–18. CFREF enables Canada's post-secondary institutions to position themselves to compete with the best in the world for talent, partnership opportunities and breakthrough discoveries, thus creating long-term economic advantages for Canada.

Overall, CIHR will fund close to 2,200 grants and awards including 1,000 new grants and awards through its Priority Driven Health Research Programs. This investment will support research on health and health system priorities and capture emerging national and international scientific opportunities.

Planned results

Expected results	Performance indicators	Target	Date to achieve target	2013–14 Actual results	2014–15 Actual results	2015–16 Actual results
CIHR funded research contributes to a stronger health care system	Percent of CIHR grants reporting contributions to strengthening the Canadian health care system	≥35%	March 31, 2018	34%	35%	33%

CIHR funded research advances knowledge in emergent and specific health priorities	Average number of research contributions per priority driven grant (e.g., peer-reviewed articles, book chapters, and reports) per year of support	≥2.2	March 31, 2018	Not applicable*
CIHR funded research in emergent and specific health priorities results in knowledge translation	Percentage of priority driven grant research contributions cited by others	≥85%	March 31, 2018	Not applicable*

* New Performance Indicator approved in the 2017–18 Management, Resources and Results Structure (MRRS). 2017–18 will be the baseline year.

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2018–19 Planned spending	2019–20 Planned spending
328,536,075	329,590,055	323,145,141	323,960,643

Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2018–19 Planned full-time equivalents	2019–20 Planned full-time equivalents
122	123	123

Information on the Canadian Institutes of Health Research's lower-level programs is available on CIHR's website[xxxv] and in the TBS InfoBase.[xxxvi]

Internal Services

Description

Internal Services are those groups of related activities and resources that the federal government considers to be services in support of programs and/or required to meet corporate obligations of an organization. Internal Services refers to the activities and resources of the 10 distinct service categories that support Program delivery in the organization, regardless of the Internal Services delivery model in a department. The 10 service categories are: Management and Oversight Services; Communications Services; Legal Services; Human Resources Management Services; Financial Management Services; Information Management Services; Information Technology Services; Real Property Services; Materiel Services; and Acquisition Services.

Planning highlights

CIHR's pledge to achieve organizational excellence is rooted in a firm commitment to continuously improve. As a steward of public funds, CIHR has an obligation to maintain the public's trust and confidence, and demonstrate good value for money. This means ensuring that Canadians understand how and why decisions are made, demonstrating the value and impact of investments, and optimizing the use of resources.

Over the coming year, CIHR will continue to modernize existing programs, policies and systems to better capitalize on Canada's health research strengths and address solutions to health challenges. CIHR will focus on addressing the recommendations of the Peer Review Working Group,[xxxvii] which was established following the July 13, 2016 CIHR Working Meeting[xxxviii] with the Research Community, and building on these activities to respond to the International Peer Review Expert Panel. CIHR will also continue to implement new technology to better support CIHR staff and stakeholders. This includes: a Customer Relationship Management solution to facilitate stakeholder management; tools to facilitate searching, matching and assigning reviewers to applications; and a Learning Management solution to facilitate the delivery of high-quality learning programs.

Over the past three years, CIHR has made significant improvements in performance measurement, demonstrating the impact of the research funded and making evidence-based decisions. In 2017–18, CIHR will continue to lead by example other Canadian science-based organizations in the area of performance measurement and in data reporting through an international partnership initiative of International Health Research Funders.

As part of the Institutes Modernization[xxxix] initiative, CIHR is now engaged in the full implementation of its Evaluation Framework and Performance Measurement Strategy for CIHR Institutes, which enhances and formalizes the ongoing assessment of the relevance and

performance of its Institutes. The evaluation of the Institutes is a key mechanism by which CIHR can monitor how well we are meeting the needs of an evolving health research environment in Canada and internationally.

In 2017–18, CIHR will also implement the new requirements of the Policy on Results as outlined by the Treasury Board of Canada Secretariat and implemented in July 2016. A new performance measurement framework for CIHR's programs and initiatives will be developed that builds on CIHR's performance measurement work to date.

As part of the Human Resources Management Strategy 2014–18, CIHR will continue to implement a new Talent Management Strategy over the coming year to strengthen CIHR's workplace and support a culture of high performance. CIHR has also implemented a Mental Health Strategy and will continue to foster a healthy work environment.

Budgetary financial resources (dollars)

2017–18 Main Estimates	2017–18 Planned spending	2018–19 Planned spending	2019–20 Planned spending
27,643,924	28,079,171	28,270,323	27,848,247

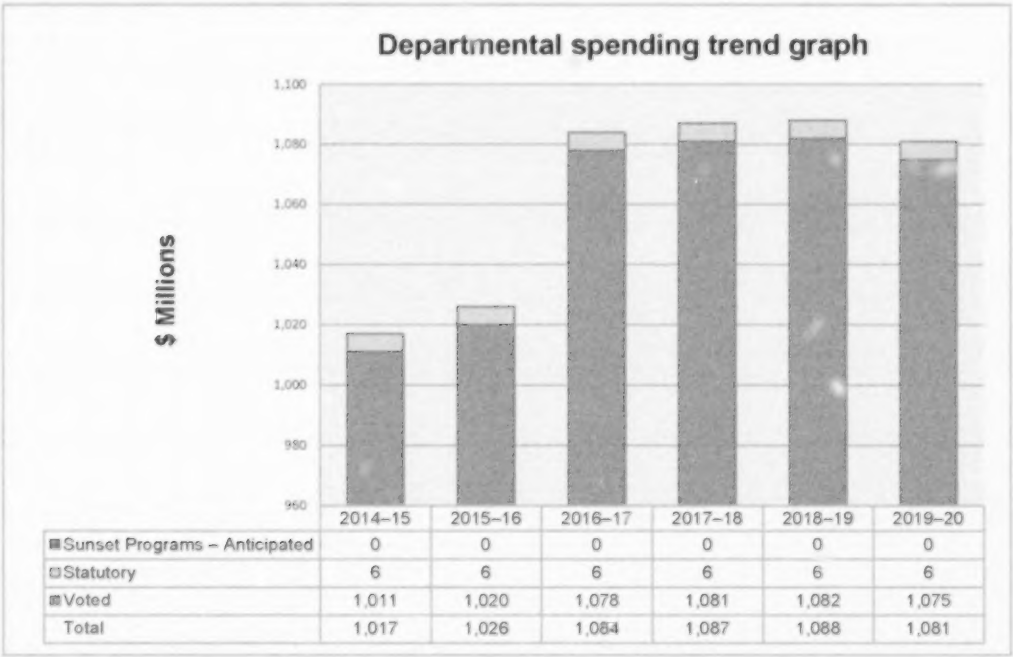
Human resources (full-time equivalents)

2017–18 Planned full-time equivalents	2018–19 Planned full-time equivalents	2019–20 Planned full-time equivalents
209	209	203

Spending and human resources

Planned spending

Departmental Spending Trend Graph



	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20
Sunset Programs – Anticipated	0	0	0	0	0	0
Statutory	6	6	6	6	6	6
Voted	1,011	1,020	1,078	1,081	1,082	1,075
Total	1,017	1,026	1,084	1,087	1,088	1,081

Budgetary planning summary for Programs and Internal Services (dollars)

Programs and Internal Services	2014–15 Expenditures	2015–16 Expenditures	2016–17 Forecast spending	2017–18 Main Estimates	2017–18 Planned spending	2018–19 Planned spending	2019–20 Planned spending
Investigator Initiated Health Research	703,626,155	692,352,816	712,174,523	729,420,974	729,681,747	736,801,477	728,758,203
Priority Driven Health Research	283,285,632	305,978,712	343,888,751	328,536,075	329,590,055	323,145,141	323,960,643
Subtotal	986,911,787	998,331,528	1,056,063,274	1,057,957,049	1,059,271,802	1,059,946,618	1,052,718,846
Internal Services	30,367,596	28,046,625	28,011,858	27,643,924	28,079,171	28,270,323	27,848,247
Total	1,017,279,383	1,026,378,153	1,084,075,132	1,085,600,973	1,087,350,973	1,088,216,941	1,080,567,093

Over the next few years, CIHR's actual and planned spending is expected to remain stable at approximately $1.1 billion.

The variance between 2015–16 expenditures and 2016–17 forecast spending of $58.0M is mainly due to the allocation of new ongoing funds through Budget 2015 and Budget 2016. Budget 2015 allocated $15.0M to CIHR beginning in 2016–17 to expand the Strategy for Patient-Oriented Research as well as address antimicrobial resistance through health research. Budget 2016 allocated $30.0M to CIHR beginning in 2016–17 to maintain and reinforce Canada's position as a leading-edge, global knowledge economy by increasing CIHR's support for early career investigators. The variance between 2015–16 and 2016–17 is also related to funding allocated to CIHR as a result of the second competition for the Canada First Research Excellence Fund (CFREF), a program that helps post-secondary institutions to excel globally in research areas that create long-term economic advantages for Canada. CIHR received an additional $9.0M for CFREF in 2016–17, and a total of $164.8M until 2022–23.

CIHR has been allocated a total of $12.0M between 2017–18 and 2023–24 for the third cohort of the Canada Excellence Research Chair (CERC) program, a program that seeks to position Canada at the leading-edge of breakthroughs in priority research areas expected to generate economic and social benefits to Canadians.

CIHR's planned spending reaches $1,089M in 2018–19. The variance between 2018–19 and 2019–20 planned spending of $7.6M is mainly due to funding allocated to CIHR for the currently funded Tri-Agency programs, such as the CERC, the Centres of Excellence for Commercialization and Research (CECR) and the Business-Led Networks of Centres of Excellence (BL-NCEs). Funding for these programs varies by fiscal year and CIHR is allocated funding following each distinct competition depending on the successful applicants' alignment with CIHR's health-related mandate. For example, current funding for CECR program ends in 2019–20, however it is anticipated that funding will be allocated to CIHR as a result of future Tri-Agency program competitions.

Planned human resources

Human resources planning summary for Programs and Internal Services (full-time equivalents)

Programs and Internal Services	2014–15 Full-time equivalents	2015–16 Full-time equivalents	2016–17 Forecast full-time equivalents	2017–18 Planned full-time equivalents	2018–19 Planned full-time equivalents	2019–20 Planned full-time equivalents
Investigator Initiated Health Research	109	105	121	125	120	122
Priority Driven Health Research	108	104	118	122	123	123
Subtotal	217	209	239	247	243	245
Internal Services	202	194	201	209	209	203
Total	419	403	440	456	452	448

In 2015–16, CIHR completed an internal reorganization, which resulted in the realignment of resources and a number of positions remaining vacant until the reorganization was fully implemented. This reorganization also resulted in the temporary freezing of positions in 2015–16 and 2016–17.

In 2016–17, CIHR unfroze all vacant positions as a result of operational requirement and created positions to deliver the programs and initiatives funded from Budget 2015 and Budget 2016. These positions will also implement the recommendations related to CIHR's application and peer review processes stemming from CIHR's Summit with the health research community in July 2016.

While positions were unfrozen or created during the 2016–17 fiscal year, CIHR only anticipates these positions to be fully staffed by the start of 2017–18, therefore explaining the increase in FTEs between 2016–17 to 2017–18.

Estimates by vote

For information on the Canadian Institutes of Health Research's organizational appropriations, consult the 2017–18 Main Estimates.[xl]

Future-Oriented Condensed Statement of Operations

The Future-Oriented Condensed Statement of Operations provides a general overview of the Canadian Institutes of Health Research's operations. The forecast of financial information on expenses and revenues is prepared on an accrual accounting basis to strengthen accountability and to improve transparency and financial management.

Because the Future-Oriented Condensed Statement of Operations is prepared on an accrual accounting basis, and the forecast and planned spending amounts presented in other sections of the Departmental Plan are prepared on an expenditure basis, amounts may differ.

A more detailed Future-Oriented Statement of Operations and associated notes, including a reconciliation of the net cost of operations to the requested authorities, are available on the CIHR's website.[xli]

Future-Oriented Condensed Statement of Operations for the year ended March 31, 2018 (dollars)

Financial information	2016–17 Forecast results	2017–18 Planned results	Difference (2017–18 Planned results minus 2016–17 Forecast results)
Total expenses	1,095,900,861	1,098,755,342	2,854,481
Total revenues	7,900,905	7,544,690	(356,215)
Net cost of operations before government funding and transfers	1,087,999,956	1,091,210,652	3,210,696

Supplementary information

Corporate information

Organizational profile

Appropriate Minister: The Honourable Jane Philpott, P.C., M.P.

Institutional Head: Dr. Alain Beaudet, President

Ministerial Portfolio: Health

Enabling Instrument(s): Canadian Institutes of Health Research Act (S.C. 2000, c. 6)[xlii]

Year of Incorporation / Commencement: 2000

Reporting framework

The Canadian Institutes of Health Research's Strategic Outcome and Program Alignment Architecture (PAA) of record for 2017–18 are shown below:

1. Strategic Outcome: Canada is a world leader in the creation, dissemination and application of health research knowledge

- **1.1 Program:** Investigator Initiated Health Research
  - **1.1.1 Sub-Program:** Operating Support
  - **1.1.2 Sub-Program:** Training and Career Support
- **1.2 Program:** Priority Driven Health Research
  - **1.2.1 Sub-Program:** Institute Driven Initiatives
  - **1.2.2 Sub-Program:** Horizontal Health Research Initiatives

Internal Services

Supporting information on lower-level programs

Supporting information on lower-level programs is available on the CIHR's website[xliii] and in the TBS InfoBase.[xliv]

Supplementary information tables

The following supplementary information tables are available on the CIHR's website.[xlv]

- Details on transfer payment programs of $5 million or more
- Disclosure of transfer payment programs under $5 million
- Upcoming evaluations over the next five fiscal years
- Upcoming internal audits for the coming fiscal year

Federal tax expenditures

The tax system can be used to achieve public policy objectives through the application of special measures such as low tax rates, exemptions, deductions, deferrals and credits. The Department of Finance Canada publishes cost estimates and projections for these measures each year in the Report on Federal Tax Expenditures.[xlvi] This report also provides detailed background information on tax expenditures, including descriptions, objectives, historical information and references to related federal spending programs. The tax measures presented in this report are the responsibility of the Minister of Finance.

Organizational contact information

Canadian Institutes of Health Research
160 Elgin Street, 9th Floor
Address Locator 4809A
Ottawa, Ontario K1A 0W9
Canada
www.cihr-irsc.gc.ca

Appendix: definitions

appropriation (crédit)

Any authority of Parliament to pay money out of the Consolidated Revenue Fund.

budgetary expenditures (dépenses budgétaires)

Operating and capital expenditures; transfer payments to other levels of government, organizations or individuals; and payments to Crown corporations.

Core Responsibility (responsabilité essentielle)

An enduring function or role performed by a department. The intentions of the department with respect to a Core Responsibility are reflected in one or more related Departmental Results that the department seeks to contribute to or influence.

Departmental Plan (Plan ministériel)

Provides information on the plans and expected performance of appropriated departments over a three-year period. Departmental Plans are tabled in Parliament each spring.

Departmental Result (résultat ministériel)

A Departmental Result represents the change or changes that the department seeks to influence. A Departmental Result is often outside departments' immediate control, but it should be influenced by program-level outcomes.

Departmental Result Indicator (indicateur de résultat ministériel)

A factor or variable that provides a valid and reliable means to measure or describe progress on a Departmental Result.

Departmental Results Framework (cadre ministériel des résultats)

Consists of the department's Core Responsibilities, Departmental Results and Departmental Result Indicators.

Departmental Results Report (Rapport sur les résultats ministériels)

Provides information on the actual accomplishments against the plans, priorities and expected results set out in the corresponding Departmental Plan.

full-time equivalent (équivalent temps plein)

A measure of the extent to which an employee represents a full person-year charge against a departmental budget. Full-time equivalents are calculated as a ratio of assigned hours of work to scheduled hours of work. Scheduled hours of work are set out in collective agreements.

government-wide priorities (priorités pangouvernementales)

For the purpose of the 2017–18 Departmental Plan, government-wide priorities refers to those high-level themes outlining the government's agenda in the 2015 Speech from the Throne, namely: Growth for the Middle Class; Open and Transparent Government; A Clean Environment and a Strong Economy; Diversity is Canada's Strength; and Security and Opportunity.

horizontal initiatives (initiative horizontale)

A horizontal initiative is one in which two or more federal organizations, through an approved funding agreement, work toward achieving clearly defined shared outcomes, and which has been designated (e.g. by Cabinet, a central agency, etc.) as a horizontal initiative for managing and reporting purposes.

Management, Resources and Results Structure (Structure de la gestion, des ressources et des résultats)

A comprehensive framework that consists of an organization's inventory of programs, resources, results, performance indicators and governance information. Programs and results are depicted in their hierarchical relationship to each other and to the Strategic Outcome(s) to which they contribute. The Management, Resources and Results Structure is developed from the Program Alignment Architecture.

non-budgetary expenditures (dépenses non budgétaires)

Net outlays and receipts related to loans, investments and advances, which change the composition of the financial assets of the Government of Canada.

performance (rendement)

What an organization did with its resources to achieve its results, how well those results compare to what the organization intended to achieve, and how well lessons learned have been identified.

Performance indicator (indicateur de rendement)

A qualitative or quantitative means of measuring an output or outcome, with the intention of gauging the performance of an organization, program, policy or initiative respecting expected results.

Performance reporting (production de rapports sur le rendement)

The process of communicating evidence-based performance information. Performance reporting supports decision making, accountability and transparency.

planned spending (dépenses prévues)

For Departmental Plans and Departmental Results Reports, planned spending refers to those amounts that receive Treasury Board approval by February 1. Therefore, planned spending may include amounts incremental to planned expenditures presented in the Main Estimates.

A department is expected to be aware of the authorities that it has sought and received. The determination of planned spending is a departmental responsibility, and departments must be able to defend the expenditure and accrual numbers presented in their Departmental Plans and Departmental Results Reports.

plans (plan)

The articulation of strategic choices, which provides information on how an organization intends to achieve its priorities and associated results. Generally a plan will explain the logic behind the strategies chosen and tend to focus on actions that lead up to the expected result.

Priorities (priorité)

Plans or projects that an organization has chosen to focus and report on during the planning period. Priorities represent the things that are most important or what must be done first to support the achievement of the desired Strategic Outcome(s).

program (programme)

A group of related resource inputs and activities that are managed to meet specific needs and to achieve intended results and that are treated as a budgetary unit.

Program Alignment Architecture (architecture d'alignement des programmes)

A structured inventory of an organization's programs depicting the hierarchical relationship between programs and the Strategic Outcome(s) to which they contribute.

results (résultat)

An external consequence attributed, in part, to an organization, policy, program or initiative. Results are not within the control of a single organization, policy, program or initiative; instead they are within the area of the organization's influence.

statutory expenditures (dépenses législatives)

Expenditures that Parliament has approved through legislation other than appropriation acts. The legislation sets out the purpose of the expenditures and the terms and conditions under which they may be made.

Strategic Outcome (résultat stratégique)

A long-term and enduring benefit to Canadians that is linked to the organization's mandate, vision and core functions.

sunset program (programme temporisé)

A time-limited program that does not have an ongoing funding and policy authority. When the program is set to expire, a decision must be made whether to continue the program. In the case of a renewal, the decision specifies the scope, funding level and duration.

target (cible)

A measurable performance or success level that an organization, program or initiative plans to achieve within a specified time period. Targets can be either quantitative or qualitative.

voted expenditures (dépenses votées)

Expenditures that Parliament approves annually through an Appropriation Act. The Vote wording becomes the governing conditions under which these expenditures may be made.

Endnotes

i Health Research Roadmap II: Capturing Innovation to Produce Better Health and Health Care for Canadians, http://www.cihr-irsc.gc.ca/e/48964.html

ii Action Plan: Building a healthier future for First Nations, Inuit, and Métis peoples, http://news.gc.ca/web/article-en.do?mthd=index&crtr.page=1&nid=1147669

iii 13 "virtual" institutes, http://www.cihr-irsc.gc.ca/e/9466.html

iv Natural Sciences and Engineering Research Council, http://www.nserc-crsng.gc.ca/

v Social Sciences and Humanities Research Council, http://www.sshrc-crsh.gc.ca/home-accueil-eng.aspx

vi Governing Council, http://www.cihr-irsc.gc.ca/e/38103.html

vii Science Council, http://www.cihr-irsc.gc.ca/e/33807.html

viii Executive Management Committee, http://www.cihr-irsc.gc.ca/e/25920.html

ix The Minister's mandate letter, http://pm.gc.ca/eng/mandate-letters

x Reforms of Open Programs and peer review: timeline, http://www.cihr-irsc.gc.ca/e/47393.html

xi Peer Review Working Group, http://www.cihr-irsc.gc.ca/e/49931.html

xii International Peer Review Expert Panel, http://www.cihr-irsc.gc.ca/e/49972.html

xiii Policy on Results, https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=31300

xiv Open letter from Alain Beaudet, President of CIHR, to Canada's health researchers, http://www.cihr-irsc.gc.ca/e/49738.html

xv Ethics action plan: Placing Ethics at the core of CIHR's business, http://www.cihr-irsc.gc.ca/e/49289.html

xvi Training award programs, http://www.cihr-irsc.gc.ca/e/49440.html

xvii Management Response, http://www.cihr-irsc.gc.ca/e/46969.html

xviii Supporting information on lower-level programs, http://www.cihr-irsc.gc.ca/e/50107.html

xix TBS InfoBase, https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html

xx Personalized Medicine, http://www.cihr-irsc.gc.ca/e/43627.html

xxi Canadian Epigenetics, Environment and Health Research Consortium, http://www.cihr-irsc.gc.ca/e/43602.html

xxii Healthy Life Trajectories Initiative, http://www.cihr-irsc.gc.ca/e/49510.html

xxiii Pathways to Health Equity for Aboriginal Peoples, http://www.cihr-irsc.gc.ca/e/43630.html

xxiv Evaluation of the Strategy for Patient-Oriented Research, http://www.cihr-irsc.gc.ca/e/49937.html

xxv SPOR Evaluation - Management Response Action Plan (MRAP), http://www.cihr-irsc.gc.ca/e/49950.html

xxvi HIV/AIDS Research Initiative, http://www.cihr-irsc.gc.ca/e/25832.html

xxvii Improved Immunization Coverage Initiative, http://www.cihr-irsc.gc.ca/e/49974.html

xxviii Canadian Immunization Research Network, http://cirnetwork.ca/

xxix Antibiotic Resistance Initiatives, http://cihr-irsc.gc.ca/e/40484.html

xxx Joint Statement of Action to Address the Opioid Crisis, http://www.healthycanadians.gc.ca/healthy-living-vie-saine/substance-abuse-toxicomanie/opioids-opioides/conference-cadre/statement-declaration-eng.php

xxxi Global Alliance for Chronic Diseases, http://www.gacd.org/

xxxii European Commission's Horizon 2020 framework, https://ec.europa.eu/programmes/horizon2020/

xxxiii Networks of Centres of Excellence, http://www.nce-rce.gc.ca/Index_eng.asp

xxxiv Canada First Research Excellence Fund, http://www.cfref-apogee.gc.ca/home-accueil-eng.aspx

xxxv Supporting information on lower-level programs, http://www.cihr-irsc.gc.ca/e/50107.html

xxxvi TBS InfoBase, https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html

xxxvii Peer Review Working Group established to advise CIHR, http://www.cihr-irsc.gc.ca/e/49867.html

xxxviii Working Meeting to discuss CIHR peer review processes, http://www.cihr-irsc.gc.ca/e/49849.html

xxxix Institutes Modernization, http://www.cihr-irsc.gc.ca/e/47656.html

xl 2017–18 Main Estimates, http://www.tbs-sct.gc.ca/hgw-cgf/finances/pgs-pdg/gepme-pdgbpd/index-eng.asp

xli Future-Oriented Condensed Statement of Operations, http://www.cihr-irsc.gc.ca/e/50102.html

xlii Canadian Institutes of Health Research Act, http://laws-lois.justice.gc.ca/eng/acts/C-18.1/FullText.html

xliii Supporting information on lower-level programs, http://www.cihr-irsc.gc.ca/e/50107.html

xliv TBS InfoBase, https://www.tbs-sct.gc.ca/ems-sgd/edb-bdd/index-eng.html

xlv Supplementary information tables, http://www.cihr-irsc.gc.ca/e/50105.html

[xlvi] Report on Federal Tax Expenditures, http://www.fin.gc.ca/purl/taxexp-eng.asp